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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,736	04/01/2004	Tsukasa Inoguchi	247322002100	1369
25226 7590 10/25/2007 MORRISON & FOERSTER LLP 755 PAGE MILL RD PALO ALTO, CA 94304-1018			EXAMINER TRAN, THIEN F	
			ART UNIT 2811	PAPER NUMBER
			MAIL DATE 10/25/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/816,736

Applicant(s)

INOUCHI, TSUKASA

Examiner

Thien F. Tran

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) 2,3 and 6-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,5 and 39-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 39 and 41 are rejected under 35 U.S.C. 102(e) as being anticipated by Wu (US 2004/0173808).

Wu discloses a light-emitting apparatus package (Fig. 3), comprising: a ceramic substrate 300 having an electric insulating property and a good heat conductivity; a first concave section 3021 recessed in a thickness direction of the ceramic substrate, the first concave section providing a light exit aperture on a first surface of the ceramic substrate; a second concave section 302, provided in the first concave section, and further recessed in the thickness direction of the ceramic substrate; and a wiring pattern 308 provided in at least one of the first concave section and the second concave section, the wiring pattern for supplying electricity to the light emitting device, the ceramic substrate being made of silicon carbide, alumina also known as sapphire (see claim 16), the second concave section having a bottom surface for tightly mounting a light emitting device 304.

Regarding claim 41, the ceramic substrate of Wu inherently has the same properties /characteristics as claimed.

Claims 1, 4, 39 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Kazuyuki (JP 2002-314149).

Kazuyuki discloses a light-emitting apparatus package (Fig. 2), comprising: a ceramic substrate 10 having an electric insulating property and a good heat conductivity; a first concave section recessed in a thickness direction of the ceramic substrate, the first concave section providing a light exit aperture on a first surface of the ceramic substrate; a second concave section, provided in the first concave section, and further recessed in the thickness direction of the ceramic substrate, the second concave section for providing an area for mounting a light-emitting device 14 on a bottom surface of the second concave section; a wiring pattern 25 provided in at least one of the first concave section and the second concave section, the wiring pattern for supplying electricity to the light emitting device; and a metalized layer 12a, provided tightly on at least a part of the bottom surface of the second concave section in such a manner that the metalized layer is electrically insulated from the wiring pattern 25, the metalized layer having a light reflective property.

Regarding claim 4, the metalized layer 12a is exposed within the second concave section.

Regarding claim 39, the ceramic substrate 10 is made of alumina.

Regarding claim 40, the ceramic substrate of Kazuyuki has the same material as claimed. Thus, the ceramic substrate 10 inherently has the same properties /characteristics as claimed.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kazuyuki (JP 2002-314149).

Kazuyuki as described above further discloses the ceramic substrate 10 containing alumina. Kazuyuki does not disclose the ceramic substrate 10 containing aluminum nitride. However, silicon carbide, alumina and aluminum nitride are ceramic materials known in the art and routinely used to form ceramic substrate in semiconductor device. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select any one of these materials as a suitable ceramic material for the ceramic substrate 10 of Kazuyuki, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of design choice. In re Leshin, 125 USPQ 416.

***Response to Arguments***

Applicant's arguments filed 08/06/2007 have been fully considered but they are not persuasive. Applicant argues that the withdrawal of claim 9 is improper because the light emitting apparatus package claimed in claim 9 is identical to that of claim 1. The examiner respectfully disagrees with the remark because claim 1 and claim 9 are not identical. Claim 1 recites elements that are not claimed in claim 9, and claim 9 recites elements that are not claimed in claim 1. The withdrawal of claim 9 is proper because claim 9 is not identical to claim 1 and recites elements not claimed by claim 1 and supported by the elected species 1 of Figs. 1-6 such as 'the light-emitting device having an electrode on that part of the inside-concave-section surface in which no light-emitting device is provided'.

With respect to the 102(e) rejection of claim 39, applicant argues that light in Wu is emitted through the transparent substrate as shown by arrows pointing down and a molding epoxy 311 which shields the LED. Applicant then states that light could not exit upward. The examiner respectfully disagrees with the remark. In Wu, the molding epoxy 311 shields the LED as a protection layer. Wu does not disclose the molding epoxy acting as a light shielding layer as alleged by applicant. Also, the molding epoxy 311 is a transparent material which does not shield light. It is noted that Wu does not disclose that light could not exit upward and it is a known fact that light travels in all directions. In fact, light is emitted through the molding epoxy 311 as it does to the transparent substrate 300. Without any light shielding layer above the LED to prevent light from the LED exiting upward, light could exit upward. Applicant's argument cannot take the place of evidence in the record when evidence is necessary. Applicant further

argues that Wu's transparent substrate could not be made of silicon carbide or alumina (also known as sapphire) which the examiner disagrees. Claims 16, 19 and 20 in Wu clearly disclose the transparent substrate being made of sapphire which is also known in the art as alumina, and silicon-carbon thermosets (silicon carbide).

With respect to the 102(b) rejection of claims 1, 4 and 39 and the 103(a) rejection of claim 5 over Kazuyuki, applicant argues that Kazuyuki's metal plate 12a is away from the bottom surface of the concave section. Hence, the metal layer is not tightly on at least a part of the bottom surface of the second concave section. It is noted that "tightly on" is not the same as "in physical contact" or "in direct contact" and the metal plate 12a of prior art is considered as formed tightly on the bottom surface of the second concave section. Claims in pending application should be given their broadest reasonable interpretation. In re Pearson, 494F.2d 1399, 181 USPQ 641 (CCPA 1974).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

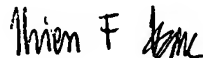
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thien F. Tran whose telephone number is (571) 272-1665. The examiner can normally be reached on 6:30AM - 3:00PM Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Gurley can be reached on (571) 272-1670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Thien F Tran  
Primary Examiner  
Art Unit 2811